

ABSTRACT OF THE DISCLOSURE

Methods are disclosed for inhibiting or disrupting Janus tyrosine kinase 3 (Jak3) dependent function in cells of lymphoid or myeloid origin, especially for blocking proliferation and function of lymphocytes (*e.g.*, T-cells, B-cells). A Mannich base compound, or a derivative or modified compound, is employed which is capable of selectively inhibiting Jak3 while affecting other protein tyrosine kinase activities to a lesser extent or not at all, to provide beneficial effects such as mitigation of transplant rejection and alleviation of allergic responses with fewer side effects than with conventional immunosuppressive agents.